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*Indian Standard*

**TERMS AND SYMBOLS FOR  
SIEVE BOTTOMS**

**PART II PERFORATED PLATES**

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# *Indian Standard*

## TERMS AND SYMBOLS FOR SIEVE BOTTOMS

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# *Indian Standard*

## TERMS AND SYMBOLS FOR SIEVE BOTTOMS

### PART II PERFORATED PLATES

#### 0. FOREWORD

**0.1** This Indian Standard (Part II) was adopted by the Indian Standards Institution on 30 July 1970, after the draft finalized by the Sieves, Sieving and Other Sizing Methods Sectional Committee had been approved by the Civil Engineering Division Council.

**0.2** A series of Indian Standards relating to sieves, methods of sieving with wire cloth and perforated plates for industrial sieves, domestic sieves has been prepared or is under preparation. These include a large number of terms and symbols used for defining screen bottoms. The extensive use of these terms has necessitated the preparation of this glossary; Part I of which covers woven and welded screens and Part II perforated plates.

**0.3** In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in the field in this country. This has been met by basing the standard on 'DIN 4185 Part 2 Screen bottoms, definitions and letter symbols for perforated screen bottoms' issued by Deutscher Normenausschuss.

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#### 1. SCOPE

**1.1** This standard (Part II) gives various terms and their explanations with illustrations relating to perforated plates. The concerned symbols are also given.

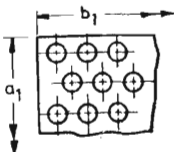
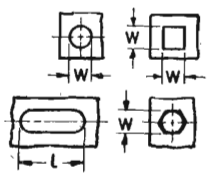
#### 2. TERMS AND SYMBOLS FOR PERFORATED PLATES

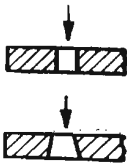
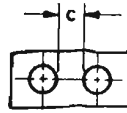
**2.1** The terms and symbols for screen bottoms relating to perforated plates have been classified into the following main sections and are given in Table 1:

- a) General,
- b) Types of holes, and
- c) Arrangement of holes.

TABLE 1 TERMS AND SYMBOLS FOR PERFORATED PLATES

( Clause 2.1 )

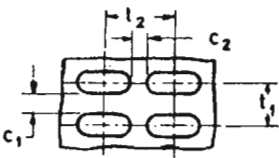
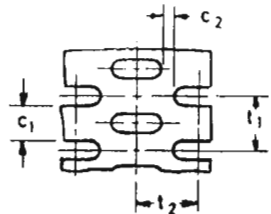
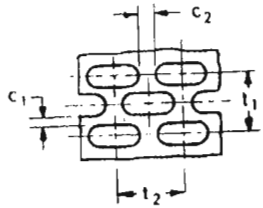
Sl No. & TERM	SYMBOL	EXPLANATION	ILLUSTRATION
1. GENERAL			
1.1 Perforated plate side	$a_1$  $b_1$	Length of the side of the perforated plate in the direction of the larger hole spacing  Length of the side of the perforated plate in the direction of the smaller hole spacing	
1.2 Hole width	$W$	—	
1.2.1 For round holes	—	Diameter of the perforation	
1.2.2 For square holes	—	Length of the side of the hole	
1.2.3 For elongated holes	—	Smaller dimension of the hole	
1.2.4 For hexagonal holes	—	Diameter of the inscribed circle	
1.3 Hole length	$l$	Longest dimension of the hole	See Fig. for 1.2.3

1.4 Passage cross section	—	The cut is made perpendicular to the plane of sieving through the middle of a hole	
1.4.1 Parallel	—		
1.4.2 Conical	—		
1.5 Bridge width	$c$	Smallest unperforated length between two neighbouring holes measured on punch entry side	
1.5.1 Side bridge width	$c_1$	Smallest unperforated length between neighbouring elongated holes, measured perpendicular to the longitudinal axis of the hole measured on punch entry side	See Fig. under 1.6.3
1.5.2 Head bridge width	$c_2$	Smallest unperforated length between neighbouring elongated holes in the direction of their longitudinal axis measured on punch entry side	See Fig. under 1.6.3

(Continued)

TABLE 1 TERMS AND SYMBOLS FOR PERFORATED PLATES — *Contd*

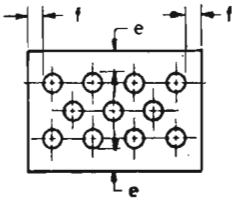
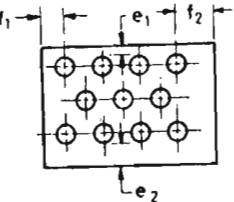
Sl. No. & Term	SYMBOL	EXPLANATION	ILLUSTRATION
1.6 Pitch	—	—	
1.6.1 For round holes	$t$	Distance between centres of two neighbouring holes $t = c + 2 \frac{W}{2} = c + W$	
1.6.2 For square holes	$t$	—	
1.6.2.1 Straight and diagonal rows	—	Distance between centres of two neighbouring square holes $t = c + W$	
1.6.2.2 Parallel rows of staggered holes	—	Distance between the centres of two neighbouring square holes or distance between centres of two rows of square holes $t = c + W$	

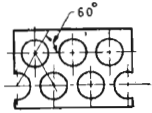
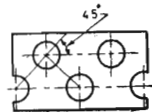
1.6.3 For elongated holes	—	—	
1.6.3.1 Straight rows of holes transverse pitch	$t_1$	Distance between centres of two neighbouring elongated holes, measured along the line perpendicular to their longitudinal axis $t_1 = c_1 + W$	
Longitudinal pitch	$t_2$	Distance between centres of two neighbouring elongated holes along their longitudinal axis $t_2 = c_2 + l$	
1.6.3.2 Staggered holes (non-overlapping) transverse pitch	$t_1$	Distance between centres of two neighbouring elongated holes, measured transverse to their longitudinal axis $t_1 = c_1 + W$	
Longitudinal pitch	$t_2$	Distance between centres of two neighbouring, staggered elongated holes rows, measured along the longitudinal direction of the holes $t_2 = c_2 + l$	
1.6.3.3 Staggered holes (overlapping) transverse pitch	$t_1$	Distance between centres of two non-staggered elongated holes, perpendicular to the longitudinal axis of the holes without considering the staggered hole in between $t_1 = 2c_1 + 2W$	
Longitudinal pitch	$t_2$	Distance between centres of two neighbouring elongated holes, measured along their longitudinal axis $t_2 = c_2 + l$	

(Continued)



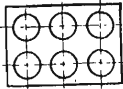
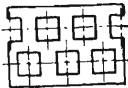
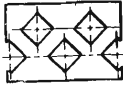
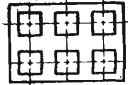
TABLE 1 TERMS AND SYMBOLS FOR PERFORATED PLATES — *Contd*

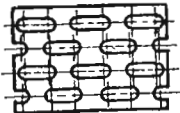
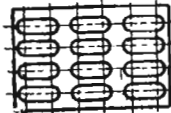
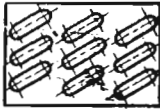
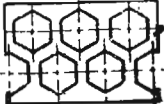
SL No. & TERM	SYMBOL	EXPLANATION	ILLUSTRATION
1.7 Unperforated border	—	Distance between the outside edges of the holes of the extreme row and the edge of the plate, measured perpendicular to the latter on punch entry side	 
1.7.1 For equal borders	$e$	In the direction of the greater distance between the hole rows	
	$f$	In the direction of the smaller distance between the hole rows	
1.7.2 For unequal borders	$e$	Smaller unperforated border	
	$e_2$	Bigger unperforated border	
	$f_1$	Smaller unperforated border	
	$f_2$	Bigger unperforated border	
1.8 Direction of flow	—	Direction in which the material is led over the plate. It is fixed by the method of working of the sieving arrangement	—

2. TYPES OF HOLES			
2.1 Round holes	<i>R</i>	Holes of circular shape	
2.2 Square holes	<i>Q</i>	Holes of square shape	
2.3 Elongated holes	<i>L.R</i>	Elongated holes with rounded ends	
2.4 Hexagonal holes	<i>H</i>	Holes with six sides	
2.5 Other holes	—	All other holes are used for sieving only in special cases	
3. ARRANGEMENT OF HOLES			
3.1 Round holes			
3.1.1 In staggered rows	<i>R<sub>s</sub></i>	—	
3.1.2 In diagonally staggered rows	<i>R<sub>d</sub></i>	—	

(Continued)

TABLE 1 TERMS AND SYMBOLS FOR PERFORATED PLATES — *Contd*

SL No. & TERM	SYMBOL	EXPLANATION	ILLUSTRATION
3.1.3 In straight rows	$R_p$	—	
3.2 Square holes	—	—	
3.2.1 Parallel (staggered)	$Q_s$	—	
3.2.2 Diagonal	$Q_d$	—	
3.2.3 In straight rows	$Q_p$	—	

<p>3.3 Elongated holes</p> <p>3.3.1 Staggered with overlapping</p> <p>3.3.2 In straight rows</p> <p>3.3.3 Oblique</p>	<p>—</p> <p><math>LR_s</math></p> <p><math>LR_p</math></p> <p><math>LR_o</math></p>	<p>—</p> <p>—</p> <p>—</p> <p>—</p>	  
<p>3.4 Hexagonal holes</p> <p>3.4.1 Staggered</p>	<p>—</p> <p><math>H</math></p>	<p>—</p> <p>—</p>	

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